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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,239	06/15/2006	Vernon Charles Gibson	YOUZ 2 00110	7200
27885	7590	04/08/2008	EXAMINER	
FAY SHARPE LLP			CHOI, LING SIU	
1100 SUPERIOR AVENUE, SEVENTH FLOOR				
CLEVELAND, OH 44114			ART UNIT	PAPER NUMBER
			1796	
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04/08/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,239	<b>Applicant(s)</b> GIBSON ET AL.
	<b>Examiner</b> Ling-Siu Choi	<b>Art Unit</b> 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 12 September 2005.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-47 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-14 and 16-22 is/are rejected.  
 7) Claim(s) 15 and 23-47 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 12 September 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statements(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 09/12/2005.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-47 are now pending, wherein claims 1-22 are drawn to a compound; claims 23-28 are drawn to a catalyst composition; claim 29 is drawn to a use of a compound; claims 30-46 are drawn to a process for polymerizing a radically polymerizable monomer; claim 47 is drawn to a polymerization mixture.

***Specification***

2. The disclosure is objected to because of the following informalities: A subtitle "BRIEF DESCRIPTION OF THE DRAWINGS:" is missing from the Specification.  
Appropriate correction is required.

***Claim Objections***

3. Claims 1-47 are objected to because of the following informalities: (A) Claim 1, line 12, "at least one of either E<sup>1</sup> or E<sup>2</sup>" is suggested to be changed to -- at least one of E<sup>1</sup> and E<sup>2</sup> -- and (B) Claim 1, line 20, "r is 0 or 1" is suggested to be changed to --r is 0 or 1--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. **The following is a quotation of the second paragraph of 35 U.S.C. 112:**

**The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

5. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

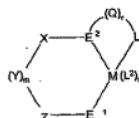
Claim 29 provides for the use of a compound or a catalyst, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 29 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Analysis***

## 6. Summary of Claim 1:

A compound of formula I



each of X, Y, Z	independently selected from O, S, NR1, ca2a3, N and CR4, and where optionally X-Y, Y-Z, Z-E1 and X-E2 each independently form part of a saturated or unsaturated ring system which may be substituted or unsubstituted; m is 0 or 1;
M	a metal selected from Ti[III], Ti[IV], Fe[II], Fe[III], Co[I], Co[II], Co [111], Ni[II], Cr[III], Mn[II]; Mn[III]; Mn[IV], Ru[II], Ru[III], Ru[IV], Pd[II], V[II], V[III], V[IV], V[V], Cu[I], Cu[II], Rh[I], Rht[III], Mo[III], Mo[V], Re[I] and Re[II];
E1 and E2	independently selected from O, S, NR5, N, P, PR6, where at least one of either E~ or 52 carries a formal negative charge; L2 is a one electron donor ligand;
n	zero or an integer such that the compound has an overall charge of zero or +1;
L1	NRFR8, pRFR8, OR7, SR7, O, S or NR TM, imidazolyl, pyridinyl, benzimidazolyl or quinoliny;
R <sup>1-8</sup> and R <sup>16</sup>	independently H or a hydrocarbyl group;
Q	a linker group
r	0 or 1

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-14 and 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ittel et al. (WO 01/44324 A2).

Ittel et al. disclose a process to polymerize olefin(s), the process comprising the step of contacting monomer(s) at a temperature of about -100°C to about +200°C in the presence of an active catalyst comprising (A) a complex of Group 3-10 transition metal and a ligand of the formula (I)



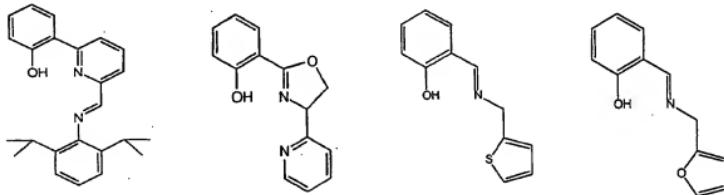
wherein  $R^1$  is hydrocarbyl or substituted hydrocarbyl, and  $R^2$  is hydrogen, hydrocarbyl or substituted hydrocarbyl, and provided that  $R^1$  and  $R^2$  taken together may be ortho-arylene or substituted ortho-arylene;  $R^3$  is hydrogen, hydrocarbyl, substituted hydrocarbyl or a functional group, provided that when  $R^1$  and  $R^2$  taken together are ortho-arylene or substituted ortho-arylene,  $R^3$  may form a fused ring system therewith;

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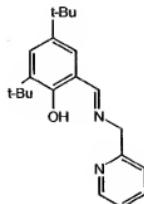
Q is nitrogen, oxygen, phosphorous or sulfur; R<sup>4</sup> and R<sup>5</sup> are each independently hydrogen, hydrocarbyl, or substituted hydrocarbyl, provided that R<sup>4</sup> and R<sup>5</sup> taken together may form a ring, and further provided that when Q is oxygen or sulfur R<sup>5</sup> is not present; Z is a bridging group of the formula :



(abstract; claim 1). Ittel et al. further disclose that the ligand is exemplified as follows,



and (B) a cocatalyst (an activator) which includes trialkylaluminum compound such as trimethylaluminum, triethylaluminum, or tri-i-butylaluminum [page 11, Formula (X); page 13, Formula (XVIII); page 14, Formula (XIX); page 19, lines 29-33; page 20, lines 1-5]. Ittel et al. furthermore disclose a method to synthesize a compound shown as follows,



[Example 1 (page 28)]. Thus, the present claims are anticipated by the disclosure of Ittel et al.

***Allowable Subject Matter***

9. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Ittel et al. (WO 01/44324 A2) do not teach or fairly suggest the claimed compound.

10. Claims 23-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Ittel et al. (WO 01/44324 A2) do not teach or fairly suggest the claimed catalyst and a process to polymerize a radically polymerisable monomer in the presence of the claimed catalyst, wherein the catalyst comprises the specific compound and the initiator.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Ling-Siu Choi/

Primary Examiner, Art Unit 1796

March 26, 2008

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